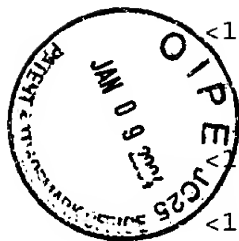


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<212> DNA

<213> HUMAN

<220>

<221> intron

<222> (1)..(512)

<223> 7th MN intron

<400> 45

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cacgttgggg ggctgagggt ggagaatggg ttgagcccag gagttcaaga caaggcgggg 180
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ttccaggagt ttgagactgc agtgagctat gatccacca ctgcctacca tctttaggat 360
acatttatTT atttataaaa gaaatcaaga ggctggatgg ggaatacagg agctggaggg 420
tgagaccctg aggtgctggg tgtgagctgg cctgggaccc ttgtttcctg tcatgccatg 480
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<211> 114

<212> DNA

<213> HUMAN

<220>

<221> intron

<222> (1)..(114)

<223> 8th MN intron

<400> 46

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<211> 617

<212> DNA

<213> HUMAN

<220>

<221> intron

<222> (1)..(617)

<223> 9th MN intron

<400> 47

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atattagaga ggcagatcat ggtggggatt cccccattgt cccagagggc taattgatta 180
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 aagcaaaaac ggtgcttata ttacccttct tcgtgtatcc accctcatcc cttggctggc 480
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<210> 48
 <211> 130
 <212> DNA
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<220>
 <221> intron
 <222> (1)..(130)
 <223> 10th MN intron

<400> 48
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 gtacacacag 130

<210> 49
 <211> 1401
 <212> DNA
 <213> HUMAN

<400> 49
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 tacaggcatg cgccaccacg cccggctaata ttttgtattt ttagtagaga cgggggtttcg 180
 ccatgttggg caggctgggc tcgaactcct gatctcaggt gatccaacca ccctggcctc 240
 ccaaagtgtt gggattatag gcgtagacca cagcgcttgg cctgaagcag ccaactcactt 300
 ttacagaccc taagacaatg attgcaagct ggtaggattg ctgtttggcc caccagctg 360
 cgggtgttgag tttgggtgcg gtctcctgtg ctttgcacct ggcccgctta aggcatttgt 420
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cagatcctgg acacccccta c 1401

<210> 50
<211> 59
<212> PRT
<213> HUMAN

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20 25 30
Gly Glu Glu Asp Leu Pro Gly Glu Glu Asp Leu Pro Glu Val Lys Pro
35 40 45
Lys Ser Glu Glu Glu Gly Ser Leu Lys Leu Glu
50 55

<210> 51
<211> 257
<212> PRT
<213> HUMAN

<400> 51

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			20					25					30						
Arg	Pro	Gln	Leu	Ala	Ala	Phe	Cys	Pro	Ala	Leu	Arg	Pro	Leu	Glu	Leu				
		35					40					45							
Leu	Gly	Phe	Gln	Leu	Pro	Pro	Leu	Pro	Glu	Leu	Arg	Leu	Arg	Asn	Asn				
	50					55					60								
Gly	His	Ser	Val	Gln	Leu	Thr	Leu	Pro	Pro	Gly	Leu	Glu	Met	Ala	Leu				
65					70					75					80				
Gly	Pro	Gly	Arg	Glu	Tyr	Arg	Ala	Leu	Gln	Leu	His	Leu	His	Trp	Gly				
				85					90					95					
Ala	Ala	Gly	Arg	Pro	Gly	Ser	Glu	His	Thr	Val	Glu	Gly	His	Arg	Phe				
			100					105					110						
Pro	Ala	Glu	Ile	His	Val	Val	His	Leu	Ser	Thr	Ala	Phe	Ala	Arg	Val				
		115					120					125							
Asp	Glu	Ala	Leu	Gly	Arg	Pro	Gly	Gly	Leu	Ala	Val	Leu	Ala	Ala	Phe				
	130					135					140								
Leu	Glu	Glu	Gly	Pro	Glu	Glu	Asn	Ser	Ala	Tyr	Glu	Gln	Leu	Leu	Ser				
145					150					155					160				
Arg	Leu	Glu	Glu	Ile	Ala	Glu	Glu	Gly	Ser	Glu	Thr	Gln	Val	Pro	Gly				
				165					170					175					
Leu	Asp	Ile	Ser	Ala	Leu	Leu	Pro	Ser	Asp	Phe	Ser	Arg	Tyr	Phe	Gln				
			180					185					190						
Tyr	Glu	Gly	Ser	Leu	Thr	Thr	Pro	Pro	Cys	Ala	Gln	Gly	Val	Ile	Trp				
		195					200					205							
Thr	Val	Phe	Asn	Gln	Thr	Val	Met	Leu	Ser	Ala	Lys	Gln	Leu	His	Thr				
	210					215					220								
Leu	Ser	Asp	Thr	Leu	Trp	Gly	Pro	Gly	Asp	Ser	Arg	Leu	Gln	Leu	Asn				
225					230					235					240				
Phe	Arg	Ala	Thr	Gln	Pro	Leu	Asn	Gly	Arg	Val	Ile	Glu	Ala	Ser	Phe				
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Pro

<210> 52
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 <212> PRT
 <213> HUMAN

<400> 52

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Phe Leu Val Gln
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<210> 53
 <211> 25
 <212> PRT
 <213> HUMAN

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 1 5 10 15

Pro Ala Glu Val Ala Glu Thr Gly Ala
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<210> 54
 <211> 59
 <212> PRT
 <213> HUMAN

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 1 5 10 15

Glu Pro Ser Pro Ser Glu Glu Pro Phe Pro Ser Val Arg Pro Phe Pro
 20 25 30

Ser Val Val Leu Phe Pro Ser Glu Glu Pro Phe Pro Ser Lys Glu Pro
 35 40 45

Ser Pro Ser Glu Glu Pro Ser Ala Ser Glu Glu
 50 55

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 cugcaaaagg ggcucucugug agucagccug cuccccucca ggcuugcucc uccccaccc 180
 agcucucguu uccaaugcac guacagcccg uacacaccgu gugcuggggac accccacagu 240
 cagccgcaug gcuccccugu gcccagccc cuggcucccu cuguugaucc cggccccugc 300
 uccaggccuc acugugcaac ugcugcuguc acugcugcuu cuggugccug uccaucacca 360
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cccacugggc gaggaggauc ugcccaguga agaggauuca cccagagagg

470

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<211> 292
<212> DNA
<213> HUMAN

<400> 56
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agtagctggg actacaggcg cccgccacca tgcccggcta attttttgta tttttggtag 180
agacgggggtt tcaccgtgtt agccagaatg gtctcgatct cctgacttcg tgatccaccc 240
gcctcggcct cccaaagttc tgggattaca ggtgtgagcc accgcacctg gc 292

<210> 57
<211> 262
<212> DNA
<213> HUMAN

<400> 57
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tagctgggac tacaggcaca tgccattaca cctgggcta attttttgta ttctagtaga 180
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<210> 58
<211> 2501
<212> DNA
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<221> misc_feature
<222> (1)..(2501)

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agaattatca ataaaaaat aaatttataa aaaaaatata aaaaaaaaaa aaaaaaaaaa 360

aaaagactta cgaatagtta ttgataaatg aatagctatt ggtaaagcca agtaaagat 420
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 ttgagccatg agttgttaga atgatgagtt tacaccttac atgctgggga ttaatttaaa 660
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aagataatTT gtctTTaaca gaatcaataa tataatccct taaaggatta tatctttgct 2160
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<211> 292
<212> DNA
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<220>
<221> misc_feature
<222> (1)

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<210> 61
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<212> DNA
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<400> 61
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 agacgggggtt tcgccatgtt ggtcaggctg gtctcgaact cctgatctca ggtgatccaa 240
 ccaccctggc ctcccaaagt gctgggatta taggcgtgag ccacagcgcc tggc 294

<210> 62
 <211> 276
 <212> DNA
 <213> HUMAN

<400> 62
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 gtgtgtgcca ccatgcccag ctaatttttt tttgtatttt tagtagacag ggtttcacca 180
 tgttggtcag gctgggtctca aactcctggc ctcaagtgat ccgcctgact cagcctacca 240
 aagtgctgat tacaagtgtg agccaccgtg cccagc 276

<210> 63
 <211> 289
 <212> DNA
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<400> 63
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 cactgcactc cagcctgggc aacagagcga gactcttgct tcaaaaaaa 289

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 <211> 298
 <212> DNA
 <213> HUMAN

<400> 64
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ctactcaagg aggctgaggt gggaagatcg cttgattcca ggagtttgag actgcagtga 240
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<210> 65
<211> 105
<212> DNA
<213> HUMAN

<400> 65
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<211> 83
<212> DNA
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aggcatgagc cactgtgcct ggc 83

<210> 67
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<212> DNA
<213> HUMAN

<400> 67
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<210> 68
<211> 11
<212> DNA
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<400> 68
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<210> 69
<211> 11
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ccccaggagg g	11
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ccctagctcc a 11

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<400> 84
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<400> 85
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<400> 86
acacagaagg g 11

<210> 87
<211> 377
<212> PRT
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20 25 30
Asp Ser Pro Arg Glu Glu Asp Pro Pro Gly Glu Glu Asp Leu Pro Gly
35 40 45
Glu Glu Asp Leu Pro Gly Glu Glu Asp Leu Pro Glu Val Lys Pro Lys
50 55 60
Ser Glu Glu Glu Gly Ser Leu Lys Leu Glu Asp Leu Pro Thr Val Glu
65 70 75 80
Ala Pro Gly Asp Pro Gln Glu Pro Gln Asn Asn Ala His Arg Asp Lys
85 90 95
Glu Gly Asp Asp Gln Ser His Trp Arg Tyr Gly Gly Asp Pro Pro Trp
100 105 110

Pro	Arg	Val	Ser	Pro	Ala	Cys	Ala	Gly	Arg	Phe	Gln	Ser	Pro	Val	Asp	115	120	125
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Leu	Leu	Gly	Phe	Gln	Leu	Pro	Pro	Leu	Pro	Glu	Leu	Arg	Leu	Arg	Asn	145	150	155
Asn	Gly	His	Ser	Val	Gln	Leu	Thr	Leu	Pro	Pro	Gly	Leu	Glu	Met	Ala	165	170	175
Leu	Gly	Pro	Gly	Arg	Glu	Tyr	Arg	Ala	Leu	Gln	Leu	His	Leu	His	Trp	180	185	190
Gly	Ala	Ala	Gly	Arg	Pro	Gly	Ser	Glu	His	Thr	Val	Glu	Gly	His	Arg	195	200	205
Phe	Pro	Ala	Glu	Ile	His	Val	Val	His	Leu	Ser	Thr	Ala	Phe	Ala	Arg	210	215	220
Val	Asp	Glu	Ala	Leu	Gly	Arg	Pro	Gly	Gly	Leu	Ala	Val	Leu	Ala	Ala	225	230	235
Phe	Leu	Glu	Glu	Gly	Pro	Glu	Glu	Asn	Ser	Ala	Tyr	Glu	Gln	Leu	Leu	245	250	255
Ser	Arg	Leu	Glu	Glu	Ile	Ala	Glu	Glu	Gly	Ser	Glu	Thr	Gln	Val	Pro	260	265	270
Gly	Leu	Asp	Ile	Ser	Ala	Leu	Leu	Pro	Ser	Asp	Phe	Ser	Arg	Tyr	Phe	275	280	285
Gln	Tyr	Glu	Gly	Ser	Leu	Thr	Thr	Pro	Pro	Cys	Ala	Gln	Gly	Val	Ile	290	295	300
Trp	Thr	Val	Phe	Asn	Gln	Thr	Val	Met	Leu	Ser	Ala	Lys	Gln	Leu	His	305	310	315
Thr	Leu	Ser	Asp	Thr	Leu	Trp	Gly	Pro	Gly	Asp	Ser	Arg	Leu	Gln	Leu	325	330	335
Asn	Phe	Arg	Ala	Thr	Gln	Pro	Leu	Asn	Gly	Arg	Val	Ile	Glu	Ala	Ser	340	345	350
Phe	Pro	Ala	Gly	Val	Asp	Ser	Ser	Pro	Arg	Ala	Ala	Glu	Pro	Val	Gln	355	360	365
Leu	Asn	Ser	Cys	Leu	Ala	Ala	Gly	Asp								370	375	

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 <213> HUMAN

<400> 88

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34

<210> 89
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<400> 89
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34

<210> 90
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<222> (1)..(3532)

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gcatgctcgt taagagtcac caccaatccc taatctcaag taatcaggga cacaacact 180
gcggaaggcc gcagggctct ctgcctagga aaaccagaga cctttgttca cttgtttatc 240
tgaccttccc tccactattg tccatgacct tgccaaatcc cctctctgtga gaaacaccca 300
agaattatca ataaaaaaat aaatttataa aaaaaatata aaaaaaaaaa aaaaaaaaaa 360
aaaagactta cgaatagtta ttgataaatg aatagctatt ggtaaagcca agtaaagat 420
catattcaaa accagacggc catcatcaca gctcaagtct acctgatttg atctctttat 480
cattgtcatt ctttggattc actagattag tcatcatcct caaaattctc cccaagtctc 540
taattacgtt ccaaacattt aggggttaca tgaagcttga acctactacc ttctttgctt 600
ttgagccatg agttgttaga atgatgagtt tacaccttac atgctgggga ttaattttaa 660
ctttacctct aagtcagttg ggtagccttt ggcttatttt tgtagctaataa tttgtagtta 720
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 aaagggcgct ctgtgagtca gcctgctccc ctccaggctt gctcctcccc caccagctc 3480
 tcgtttccaa tgcacgtaca gcccgtagac accgtgtgct gggacacccc ac 3532

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 <211> 204
 <212> DNA
 <213> HUMAN

<400> 91
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 cctccaggc ttgtcctcc cccaccage tctcgtttcc aatgcacgta cagcccgtag 180
 acaccgtgtg ctgggacacc ccac 204

<210> 92
 <211> 132
 <212> DNA
 <213> HUMAN

<400> 92
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 aaggcagcat gc 132

<210> 93
 <211> 275
 <212> DNA
 <213> HUMAN

<400> 93
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ctgtgcacac acctgcccct cactccaccc ccatactagc tttggtatgg gggagagggc 120
acagggccag acaaacctgt gagactttgg ctccatctct gcaaaagggc gctctgtgag 180
tcagcctgct cccctccagg cttgctcttc cccacccag ctctcgtttc caatgcacgt 240
acagcccgta cacaccgtgt gctgggacac cccac 275

<210> 94
<211> 89
<212> DNA
<213> HUMAN

<400> 94
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ccgtacacac cgtgtgctgg gacaccca 89

<210> 95
<211> 61
<212> DNA
<213> HUMAN

<400> 95
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a 61

<210> 96
<211> 116
<212> DNA
<213> HUMAN

<400> 96
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acaaacctgt gagactttgg ctccatctct gcaaaagggc gctctgtgag tcagcc 116

<210> 97
<211> 36
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<213> HUMAN

<400> 97
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Pro Pro Gly Glu Glu Asp Leu Pro Gly Glu Glu Asp Leu Pro Gly Glu
20 25 30

Glu Asp Leu Pro
35

<210> 98
<211> 6
<212> PRT
<213> HUMAN

<400> 98
Gly Glu Glu Asp Leu Pro
1 5

<210> 99
<211> 4
<212> PRT
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<400> 99
Glu Glu Asp Leu
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<211> 5
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<400> 100
Glu Glu Asp Leu Pro
1 5

<210> 101
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<212> PRT
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<400> 101
Glu Asp Leu Pro Ser Glu
1 5

<210> 102
<211> 7
<212> PRT
<213> HUMAN

<400> 102
Glu Glu Asp Leu Pro Ser Glu
1 5

<210> 103
<211> 6
<212> PRT
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<400> 103

Asp Leu Pro Gly Glu Glu
1 5

<210> 104

<211> 22

<212> PRT

<213> HUMAN

<400> 104

Gly Gly Ser Ser Gly Glu Asp Asp Pro Leu Gly Glu Glu Asp Leu Pro
1 5 10 15

Ser Glu Glu Asp Ser Pro
20

<210> 105

<211> 25

<212> PRT

<213> HUMAN

<400> 105

Gly Glu Glu Asp Leu Pro Ser Glu Glu Asp Ser Pro Arg Glu Glu Asp
1 5 10 15

Pro Pro Gly Glu Glu Asp Leu Pro Gly
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<210> 106

<211> 24

<212> PRT

<213> HUMAN

<400> 106

Glu Asp Pro Pro Gly Glu Glu Asp Leu Pro Gly Glu Glu Asp Leu Pro
1 5 10 15

Gly Glu Glu Asp Leu Pro Glu Val
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<210> 107

<211> 7

<212> PRT

<213> HUMAN

<400> 107

Gly Glu Thr Arg Ala Pro Leu
1 5

<210> 108

<211> 7

<212> PRT

<213> HUMAN

<400> 108
Gly Glu Thr Arg Glu Pro Leu
1 5

<210> 109
<211> 7
<212> PRT
<213> HUMAN

<400> 109
Gly Gln Thr Arg Ser Pro Leu
1 5

<210> 110
<211> 1247
<212> DNA
<213> HUMAN

<220>
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<222> (1)..(1247)

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tggtaccact tggatcataa gtggaaaaac agtcaagaaa ttgcacagta atacttgttt 180
gtaagaggga tgattcaggt gaatctgaca ctaagaaact cccctacctg aggtctgaga 240
ttcctctgac attgctgtat ataggctttt cctttgacag cctgtgactg cggactattt 300
ttcttaagca agatatgcta aagttttgtg agcctttttc cagagagagg tctcatatct 360
gcatcaagtg agaacatata atgtctgcat gtttccatat ttcaggaatg tttgcttgtg 420
ttttatgctt ttatatagac agggaaactt gttcctcagt gacccaaaag aggtgggaat 480
tgttattgga tatcatcatt ggcccacgct ttctgacctt ggaaacaatt aagggttcat 540
aatctcaatt ctgtcagaat tgggtacaaga aatagctgct atgtttcttg acattccact 600
tggtaggaaa taagaatgtg aaactcttca gttgggtgtg gtccctngtt tttttgcaat 660
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tcatgatctt taaagatcaa taatataatc ctttcaagga ttatgtcttt attataataa 780
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 cagagtgcaa tggtagagtc tcagctcact gcagcctcaa ccgcctcggc tcaaaccatc 1140
 atcccatttc agcctcctga gtagctggga ctacaggcac atgccattac acctggctaa 1200
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<210> 111
 <211> 17
 <212> DNA
 <213> HUMAN

<400> 111
 ctctgtgagt cagcctg 17

<210> 112
 <211> 23
 <212> DNA
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<400> 112
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<210> 113
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<400> 113
 agactttggc tccatctc 18

<210> 114
 <211> 20
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<400> 114
 cactccaccc ccatcctagc 20

<210> 115
 <211> 26
 <212> DNA
 <213> HUMAN

<400> 115
 gggagagggc acagggccag acaaac 26

<210> 116
 <211> 20
 <212> PRT
 <213> HUMAN

<400> 116

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
1 5 10 15

Gly Gly Gly Ser
20